



# **NORTH CAROLINA'S**

## **2001 ANNUAL SYNAR COMPLIANCE REPORT**

### **DESCRIBING STRATEGIES AND ACTIVITIES TO REDUCE YOUTH ACCESS TO TOBACCO PRODUCTS AS REQUIRED BY THE FEDERAL SYNAR AMENDMENT**

**Submitted To:** The Secretary of the U.S. Department of Health and Human Services as part of the Substance Abuse Prevention and Treatment Block Grant Application as required by the Synar Amendment

**Submitted By:** The North Carolina Department of Health and Human Services  
Division of Mental Health, Developmental Disabilities and Substance Abuse Services

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## **State Law Regarding Sale of Tobacco Products to Individuals Under Age of 18 (Section 1926):**

An agreement to continue to have in effect a State law that makes it unlawful for any manufacturer, retailer, or distributor of tobacco products to sell or distribute any such product to any individual under the age of 18; and, to enforce such laws in a manner that can reasonably be expected to reduce the extent to which tobacco products are available to individuals under age 18 (See 42 U.S.C. 300x-26 and 45 C.F.R. 96.130).

### **SECTION I**

#### **FFY 2001 (Compliance Progress):**

42 U.S.C. 300x-26 of the Public Health Service Act requires certain information regarding the sale/distribution of tobacco products to individuals under age 18.

- 1. Describe any changes or additions to the State tobacco statute relating to 42 U.S.C. 300x-26 since the last application. Attach a photocopy of the changes and describe the impact they will have on enforcement of State tobacco law(s).**

No changes or additions have been made to North Carolina's statute prohibiting the sale and distribution of tobacco products to minors since the last application.

- 2. Describe how the annual report required under 45 C.F.R. 96.130(e) was made public within the State, along with the State Plan as provided in 42 U.S.C. 300x-51.**

Announcements are placed in the major newspapers throughout the State inviting the public to make comments on the Substance Abuse Prevention and Treatment Block Grant. The announcement notes that copies of the Block Grant are available for public review at major libraries in the State.

- 3. Identify the agency or agencies designated by the Governor for the implementation of the requirements. Identify the State agency responsible for conducting random, unannounced inspections. Identify the State and/or local agency or agencies that are responsible for enforcing the tobacco access law(s) (See 42 U.S.C. 300x-26 and 45 C.F.R. 96.130).**

The Governor has designated the North Carolina Department of Health and Human Services, Substance Abuse Services Section as the Single State Agency charged with oversight and administration of the Substance Abuse Prevention and Treatment Block Grant. Therefore, the overall responsibilities of adhering to the specific guidelines (including the annual inspections) of the Synar Amendment falls under our organizational mandate.

Executive Order 123, signed by Governor Hunt on December 18, 1997, designated the N.C. Division of Alcohol Law Enforcement (ALE) as the lead enforcement agency to implement model education and enforcement of the State's law to reduce tobacco sales to minors.

4. **Describe briefly the coordination and collaboration that occurs between your State's Tobacco and Health Office (Association of State and Territorial Health Officials) and Single State Authority for Substance Abuse (NASADAD). Discuss how State efforts to reduce youth access to tobacco relate to other tobacco control and prevention initiatives in your State.**

The NC Department of Health and Human Services (DHHS) was reorganized in 1998 and now houses both Substance Abuse Services and the Division of Public Health, which includes the Tobacco Prevention and Control Branch (formerly known as Project ASSIST). Both of these organizational units ultimately report to the Secretary of DHHS, which enhances our collaborative efforts.

There is a strong working relationship between the State's Tobacco Prevention and Control Branch and the Substance Abuse Services Section. This relationship has continued to grow and prosper over the past seven years. We have participated in joint planning of events (i.e. Governor's Summit to Prevent Youth Tobacco Use), trainings with Law Enforcement Agencies on State's Youth Access Law, as well as coordinating policy and media advocacy strategies.

The Synar Coordinator serves as a member of the North Carolina Project ASSIST Statewide Coalition Board, member of the Branch's Tobacco Free Schools Taskforce and Vice-Chair of its African American Tobacco Use Prevention Action Team. The African American Tobacco Use Prevention Action Team has developed and implemented (over the past five years), a youth advocacy and empowerment initiative. The Initiative involves local youth organizations across the state to engage these young people through training and other opportunities in tobacco use prevention activities at the state and local level. The cornerstone of the Initiative is a 3 ½ day tobacco use prevention retreat that focuses on skill-building workshops in youth advocacy, policy-media strategies (youth access and clean indoor air), presentation skills and community interventions.

In turn, the Tobacco Prevention and Control Branch has a permanent slot on Substance Abuse Services' Statewide Prevention Advisory Committee. Also, the Branch is working closely with the Synar Coordinator to involve local Area Mental Health and Substance Abuse Prevention Professionals in the tobacco use prevention training activities and resource opportunities that they offer. In addition, the Governor's Interagency Workgroup on Reducing Tobacco Sales to Minors created by Executive Order 123 is under the joint leadership of Substance Abuse Services, Tobacco Prevention and Control and the NC Division of Alcohol Law Enforcement.

The Synar Coordinator also works collaboratively with our State Prevention Program, including the State Incentive Grant and the Statewide Prevention Advisory Committee to ensure that tobacco related initiatives are coordinated and to provide support to local staff in implementing their programs. She is also working with other state tobacco control initiatives to address public and private policy efforts such as promoting smoke free environments (i.e. restaurants, work sites), tobacco free schools; health promotion and cessation efforts with coalitions such as Healthy Carolinians and NC Prevention Partners.

5. **In 2-3 pages, list and describe all the State's activities to enforce the State youth access to tobacco law(s) in FFY 2001. Such activities may include statewide and/or targeted enforcement activities.**

§ **If enforcement of youth access laws is carried out by local law enforcement agencies, provide a detailed summary of local enforcement activities to verify the enforcement is taking place.**

- § **Include an estimate of the number and types of penalties that were imposed for violation of access laws and policies, and whether these penalties were assessed against owners, clerks, or youth. Examples of penalties include citations, warning letters, public listing of violators, etc.**
- § **Provide a summary of the final disposition of citations. Example(s) of final disposition include fines that were assessed and collected, licenses that were suspended or revoked, dismissals, etc.**
- § **Describe additional activities conducted to support enforcement and compliance with State tobacco access law(s). Additional activities may include merchant education, community education, media use, and community mobilization by statewide and/or local community-based coalitions and/or other State agencies.**

### **Enforcement Activities**

North Carolina does not combine law enforcement with the Synar Survey. Merchant education and active enforcement of the State's Youth Access Law are critical components of the State's overall statewide strategy to reduce youth access to tobacco products. While the Substance Abuse Services Section oversees the implementation of the Synar Survey, the Division of Alcohol Law Enforcement (ALE) has taken the lead in the area of enforcement. ALE is reaching out to retail merchants providing them with basic information on the youth access law and providing training to the merchants through the BARS (Be A Responsible Seller) Program. This statewide training program is conducted on a monthly basis in each ALE district across the State. The training program includes specific information on North Carolina's law, responsibility of merchants, suggestions for detecting false I.D.'s and refusing sales to minors. This training is offered to employees in all licensed alcohol beverage outlets in the State, which includes grocery stores, convenience stores, restaurants and gas stations. In addition, ALE's standard operating procedure is to invite every clerk who violates the State Youth Access law to attend the BARS training program. ALE conducted a total of 566 BARS training programs with 6,823 people attending during the period from July 1, 2000 to June 30, 2001.

Since losing the FDA contract in March 2000 (which provided funding for enforcement for the federal Youth Access Law), maintaining a statewide enforcement effort continues to be challenge for the state. The Department of Health and Human Services has had to work diligently to identify stop gap state funding sources (i.e. lapsed salary) to prevent a lag in enforcement. Since the state is in a budget deficit, we are very concerned about securing long-term funding for enforcement. North Carolina was successful in securing adequate funding to sustain ALE's efforts through December 31, 2001. The NC Division of Alcohol Law Enforcement reports a total of 4,884 compliance checks were conducted by their Agents with 890 citations issued for violation of the State's Youth Access to Tobacco Products Law from July 1, 2000 to June 30, 2001.

In addition to ALE's efforts, there are also numerous local police and sheriff's departments that participated in the 1996 and 1997 regional law enforcement training programs that have incorporated enforcement of the State's Youth Access to Tobacco Products law into their departments' on-going enforcement efforts.

The efforts of local law enforcement departments and ALE are reflected in the North Carolina Administrative Office of the Courts' (AOC), data on charges and convictions for the calendar year

through the “Frequency of Use of Offense Codes in the CIS (Court Information System) Criminal System”. AOC’s data showed a decrease since 1999 in the frequency of purchase and an increase in the sale offense codes. There was a particularly large increase in regards to the selling offense. The 2000 data indicates that 86 defendants, in 86 cases, were charged with purchase of cigarettes by persons under 18 with 31 defendants convicted. In addition, 834 defendants in 837 cases were charged with misdemeanor sale of cigarettes to minors during 2000 and 541 defendants were convicted in 543 cases.

On July 14, 2000, the North Carolina General Assembly gave final approval to HB 1431 creating a Health and Wellness Trust to receive 25% of the State’s Tobacco Settlement funds. One of the powers and duties of the Commission as set forth in the legislation is that they shall ... “Ensure that good faith efforts are made to achieve federal mandates targeting the reduction of youth access to tobacco products.”... This provision is seen by Substance Abuse Services, as the much needed long-term solution to fund enforcement in order to reduce the overall state buy rate to less than 20% in compliance with the Synar Amendment. The Board of the Health Trust Commission was convened in May 2001. The Lt. Governor was elected chair of the body. Since that time the Board has met two other times to begin getting organized with staff and to hear from state officials regarding the important public health issues in North Carolina. A priority for funding as recommended by the Governor is to develop a prescription drug plan for NC senior citizens. While such a plan may absorb a substantial amount of funding from the Trust, a coalition of state level partners, many of whom worked diligently to get the Health Trust established from the Master Settlement, has also developed a statewide, comprehensive plan for tobacco prevention and control. The plan, which is based on CDC’s best practices has been published and presented to members of the Board for their review. Local and state level organizations (such as American Cancer Society, American Lung Association, American Heart Association and NC Prevention Partners) will continue to advocate for funds from the Trust to support tobacco prevention efforts. There continues to be weekly media coverage of this issue on television and in newspapers. News articles and letters to the editor are on-going as parents, health professionals and others express concerns and/or outrage that tobacco use prevention programs have not been earmarked as a priority for funding by the Health Trust Commission. Substance Abuse Services Section is still hopeful that some funding for enforcement will eventually come from this Trust. Appendix \_\_\_\_ : copy of Vision 2010 NC’s Comprehensive Plan to Prevent and Reduce the Health Effects of Tobacco Use.

## **ADDITIONAL ACTIVITIES CONDUCTED TO SUPPORT ENFORCEMENT AND COMPLIANCE WITH STATE TOBACCO ACCESS LAW**

### **Local Area Mental Health and Substance Abuse Programs**

Substance Abuse Services began requiring local Area Programs to conduct a minimum of 8 hours per month of activities designed to reduce youth access in their communities during SFY 99/00. Area Programs are required to actively engage in activities such as community collaboration efforts, merchant education programs, and promotion of local enforcement of the State’s Youth Access Law to insure local compliance with Synar provisions. In addition, Area Programs report their Synar related activities in the SFY 00/01 SAPT Block Grant Compliance Report. They are also required to maintain appropriate documentation of youth access related activities conducted during each six month reporting period. During the state fiscal year, the Area Programs generated 4,470 hours of youth access related activities throughout North Carolina. This is a substantial increase in youth access activities implemented at the local level since 1999!

Four regional meetings were held with Tobacco Liaisons from the Area Programs during April and May 2001. The goals of the meetings were to provide information on the federal Synar Amendment, the reporting requirements, resources as well as training opportunities, and to highlight strategies and activities currently being implemented to reduce youth access to tobacco products. The meetings were well attended with 31 of the 39 Area Programs participating. Feedback from the meetings was very positive. Local staff seemed to have benefited from getting together to discuss issues and strategies and asked if they could meet again during the year. In June 2001, a synopsis of the ideas and strategies discussed at the meetings was written and sent to the Tobacco Liaisons and Substance Abuse Directors at each Area Program. As a result of the meetings, a small workgroup will be convened in August 2001 to further discuss some issues that emerged during the regional meetings. The workgroup will make recommendations to the Substance Abuse Services Section on these issues as well as possible amendments (i.e. expand the list of activities to reduce youth access to tobacco products) to the SAPT Block Grant Compliance Report Form on Synar Activities.

The Area Programs have partnered with other state/ local organizations such as the Underage Drinking Coalitions, school groups, youth organizations, Project ASSIST Coalitions, their local law enforcement and district Alcohol Law Enforcement Agents to conduct retailer group education sessions; make individual visits to retailers; distribute merchant education materials; conduct health fairs and other community events. Some of the Area Programs developed press releases for their events, had stories in the local newspapers and included youth access and other tobacco related information in their agency or school newsletter.

### **Statewide Prevention Conference**

The Synar Coordinator planned and participated in three specific activities during Substance Abuse Services' Annual Voices of Prevention Conference held May 14-17, 2001. These activities were designed to provide the 39 Area Program Tobacco Liaisons with additional information and strategies for reducing youth access to tobacco products. First, the Synar Coordinator presented information on youth tobacco use issues in the workshop titled "What is the Latest in Underage Substance Abuse?" A second workshop titled "Youth Tobacco Issues and Strategies for Prevention" highlighted successful tobacco prevention programs and activities across the state focusing on merchant education, youth cessation, youth empowerment activities and peer education using the Teens Against Tobacco Use (TATU) program. The Synar Coordinator also hosted a meeting for Tobacco Liaisons from the Area Programs as a follow-up to the regional meetings held in April and May. The meeting focused on group exercises and report outs from each group regarding strategies and activities to involve youth, parents, schools, community partners and mass media in efforts to prevent youth use and access to tobacco products.

One of the highlights of the Prevention Conference was the luncheon keynote address on May 16<sup>th</sup> given by Mississippi Attorney General Mike Moore (with approximately 450 prevention professionals in attendance). His presentation "Why Curtailing Tobacco Use Among Youth is the Key to Curtailing Other Substances" was very inspiring and highlighted successful initiatives in his home state. Following his presentation, the Tobacco Liaisons had the opportunity during their meeting to have an open dialogue with Attorney General Mike Moore who talked about his state's efforts to reduce youth access to tobacco products and answered questions from the audience. This year's Prevention Conference was significant because it had a much greater focus on tobacco prevention (i.e. several workshops/ keynote address with a national speaker) than in past years.

The following question pertains to the sampling methodology used by the State to meet the requirements of the Synar Regulation to measure State compliance with youth access to tobacco law.

6. In 2-3 pages, describe the sampling methodology used by the State to conduct random, unannounced inspections. Include in the description the following information:

**Sampling design and methodology**

**Did the sampling methodology change from the previous year? If so, indicate the following.**

- \$ what changes were made
- \$ why the changes were necessary
- \$ when the changes occurred

**Describe the source(s) and quality of the sampling frame.**

- \$ the date when the sampling frame was last updated,
- \$ the procedures used to insure that the addresses of tobacco outlets on the sampling frame are accurate,
- \$ the criteria used to determine accessibility of outlets to youths,
- \$ the methods used to verify that outlets identified on the sampling frame actually do sell tobacco,
- \$ the methods used to locate tobacco outlets that were not on the sampling frame,
- \$ the accuracy of the frame: the percentage of the sampling frame that included outlets that actually sell tobacco and had accurate addresses,
- \$ the coverage of the frame: the percentage of all tobacco outlets in the State that were actually included on the sampling frame.

**Describe the random selection process.**

- \$ the geographic unit used for sampling,
- \$ the procedures used for the selection of sample of geographic sampling units,
- \$ the method used for the selection of outlets from within each sample geographic sampling unit,
- \$ the original sample size, minimum number of required inspections, and final sample size; and explain how they were determined,
- \$ if applicable, explain the difference between the original sample size and the final sample size; and indicate whether the final sample is representative of the distribution of tobacco outlets in the State.

**Describe how replacement outlets and non-completed inspections were handled. Provide a complete tally of non-completed inspections that include:**

- \$     **the number of inspections that were not completed because the outlets were ineligible,**
- \$     **the number of eligible but non-completed inspections.**

North Carolina **did not change** the sampling methodology used to identify and randomly select tobacco outlets for its FFY 2001 annual inspections. This same methodology was used to draw 159 additional outlets, new potential outlets from the most recent quarterly update of Dun & Bradstreet files on CD, to be inspected and to allow for normal outlet attrition. The State again contracted with Stephen Williams, the sampling statistician, who had developed North Carolina's approved sampling methodology in accordance with SAMHSA's Synar Regulation: Sample Design Guidance, to draw the FFY 2001 sample, assist in monitoring field work, analyze the data, and prepare a final report on the findings which are included in this report.

Since North Carolina does not license tobacco outlets, the State used Dun & Bradstreet's business list to develop the universe of tobacco outlets including both over-the-counter and vending machines that are accessible to youth (under the age of 18). Outlets that were not accessible to youth were excluded; the rule was to exclude membership establishments and unsafe outlets. Bars were deemed unsafe for the field staff to visit, but most restaurant/lounge outlets were deemed accessible. The study population consisted of potential outlets defined by the following establishments listed with Standard Industrial Code (SIC):

**Listed Categories (in Guidelines) that are Included in the Study**

- 53 General Merchandise\*
- 54 Food Stores (includes most of the convenience marts)
- 5541 Gas Stations
- 5812 Restaurants (eight fast-food chains verified by telephone to have a no-tobacco-vending policy were excluded; even so, the large number of restaurants on the list proved, as expected, to produce relatively few establishments that sell tobacco products)\*
- 5912 Drug Stores
- 5993 Tobacco Stores
- 5994 News Stands
- 7011 Hotels/Motels
- 7933 Bowling Centers\*
- 7993 Coin Operated Games\*
- 7996 Amusement Parks\*
- 7999 Amusement/Recreation\*

\* Sampled at a reduced rate (accounted for in analysis).

**Listed Categories that are not included in the Study**

- 5813 Bars excluded as unsafe for buy attempts and mostly not accessible to underage youth
- 5921 Liquor Stores (all are State stores that do not sell tobacco)
- 5962 Vending Machines (vending machines are being included in the survey, but no 5962 establishments were used because these establishments are the machine distributors--not a source of information about the number or location of the machines).
- 5999 Misc. Retail Stores are specialized—sporting goods, etc. where tobacco products are rarely sold.

- 7948 Race Tracks: deemed too isolated and rare to be feasible.
- 7992 Golf Courses: deemed too isolated and rare to be feasible.
- 7997 Membership Recreation Clubs (not usually accessible to nonmembers, such as the survey team)

The sampling frame was last updated in November 2000 and is updated annually to include new outlets that were not on the frame in the previous survey. The sampling frame was examined to eliminate duplicates. Telephone calls were made to verify that the outlets identified actually do sell tobacco. Those outlets that were not reached by phone (a listed business in the telephone directory assistance, but there was no answer when telephoned) were included in the sample to be visited by the survey team. North Carolina has selected a probability sample and used non-response adjusted sampling weights to produce unbiased estimates of the compliance rates for potential outlets on the frame.

There are some vending machines accessible to youth although they are decreasing in number across the state. They are mostly located hotels, motels, lounges and bars. The North Carolina state statute requires vending machines be supervised. Those that are located in bars are defined as ineligible because they are deemed unsafe for inspection by the team. We do not know in advance of the inspection whether or not a potential outlet has a vending machine or not – same as Over-the-Counter (OTC) outlets. OTC and vending machine outlets are treated the same. So, in expectation, they are proportionately represented in the sample. Hence, the weights are also calculated in the same manner for both types of outlets. The separate estimates are obtained by domain estimation methods (observation and weights are simply multiplied by an indicator (0,1) variable that is 1 if it is a vending machine and zero otherwise.

## **SAMPLING DESIGN AND METHODOLOGY**

**Multi-stage design:** A multi-stage design was used to facilitate the development of the sampling frame and to reduce field cost. Since no comprehensive listing of outlets was available, the sampling frame was developed from alternative sources including Dun & Bradstreet's business list. Three stages were used in the design. The sampling and data collection methods are basically unchanged from the previous survey. The 2001 sample was supplemented to provide coverage of new outlets from the most recent quarterly update of Dun & Bradstreet files on CD and to compensate for normal attrition of existing outlets from the previous survey.

**Stage 1:** In this stage, the State's 100 counties singly or in pairs comprised the primary sampling units (PSUs); minimum PSU size is 30 potential outlets. This combination resulted in a total of 94 PSUs. These PSUs were stratified into 4 primary strata based on mental health districts and into secondary strata within each of those 4 strata, based on estimated number of outlets. This resulted in a total of 11 explicit final strata. Within these strata, PSUs were sorted by size to achieve additional stratification. PSUs were selected from each of these strata using probability proportional to size (number of outlets, estimated from Bureau of Census population counts and other sources such as NC Department of Revenue lists).

**Stage 2:** Within the sample PSUs, second stage units (SSUs) were formed that are essentially equivalent to the postal ZIP areas. Some of the ZIP areas were combined to form SSUs with a minimum of eight outlets. The SSUs were also selected with probability proportional to size (again the estimated number of outlets). All random numbers were generated within Excel spreadsheet using the random number function (RAND).

**Stage 3:** The FSUs, final stage units, were potential outlets within the sample SSUs; these outlets were mostly selected with equal probabilities, except that the candidate outlet categories with relatively few tobacco outlets were sampled at a lesser rate as described in the stratification section. The use of area-

based sampling units facilitates field checking for missing potential outlets on the list. Such checks were conducted in 1998 and 1999.

## **SAMPLE SIZE**

**Sample size and allocation:** Past survey data and cost information were used to obtain sample size requirements and an optimum allocation at each stage of the design. These data were also used to predict the design effect. The design effects and precision requirements determined the sample size. The size of the sample assigned to the field staff allowed for these factors plus the predicted proportion of potential outlets that do not sell tobacco, are out of business, or for other reasons are not eligible.

**Design effect (deff):** The design effect is a measure of survey precision compared to the precision that would result from a simple random sample (srs) using the same sample size. It is calculated as the variance of the survey estimates divided by the variance of a srs estimate. Since the proposed design focused on proportional allocation, the minimal impact of unequal weighting is largely offset by the proposed stratification. The impact of clustering, however, must be accounted for. The net effect from all sources for the 2001 survey was approximately 2.0.

**Sample size and survey precision:** In the 1996 report for NC, a target noncompliance rate was projected for each year to 2001. The State renegotiated the performance targets in February 2000 to have an overall noncompliance rate of 20 percent or less in 2003. The survey precision requirements are based on the need to establish whether or not these targeted rates are being met. Sampling errors for point estimates of compliance rates were also calculated to ensure their acceptability. Refer to Table 1, below, for the sample sizes and sampling errors summary.

Adequate sample size was determined first, for example, how many buy attempts are needed to accomplish the required survey accuracy. How this sample is allocated among strata and by sampling stage is determined by optimum allocation. Optimum allocation refers to the simultaneous solution of equations that describe the relative costs and variances at each stage of sampling or stratum.

**Optimum Allocation of Outlets:** To investigate the optimum number of units at each of these stages, the total variability of buy data from the previous survey was partitioned into those (three) stages. Also, the variable costs associated with each of these stages are estimated. These variance components and cost components are refined each year on the basis of previous year's survey. Using data from the 1997 - 1999 surveys resulted in the use of a sample size of 802 buy attempts; made in 21 counties, averaging 4 ZIP areas per county, and approximately 10 outlets per ZIP area.

## **SAMPLING DESIGN TECHNIQUES: CLUSTERING AND STRATIFICATION**

**Clustering:** The field costs were substantially reduced compared to unclustered sampling. Work was clustered mostly in the denser communities; in 20 PSUs and in ZIP areas within those PSU counties. This clustering reduces survey precision for a given sample size, but is cost effective because of reduced field costs (travel time for a field team is very expensive).

**Stratification:** PSUs were stratified by the four mental health regions and by estimated number of tobacco outlets (size-strata) within those regions. A total of 11 strata resulted; two certainty strata (large counties), and 9 strata for which 2 PSUs (counties) each were randomly selected for the survey. The number of sample outlets per ZIP is allowed to vary slightly in order to obtain nearly equal selection probabilities for most outlets. Establishments in some SIC categories; however, sell tobacco less frequently than those in other SIC categories. To improve survey efficiency; therefore, establishments in

these SIC categories were sampled at a lesser rate. Low-percentage establishments were sampled at one-half the rate of high-percentage establishment rate. High percentage establishments are defined to be gas stations, convenience stores, grocery stores, drug stores, tobacco stores, and hotels/motels.

- 7. In 3-5 pages, report the complete results of the inspections conducted for the Synar survey during the FFY 2001. Report the unweighted and weighted retailer violation rates, including the corresponding standard error, and the confidence interval for the weighted reported retailer violation rate. Provide all supporting tables, formulas, and values used to calculate the final weighted retailer violation rate.**

## **SURVEY RESULTS**

The results of this year's annual inspection show a small reduction in the overall rate of noncompliance from 20.1 to 19.9 percent. The small increase in the vending machine noncompliance rate was offset by the small decrease for the over the counter rate. This sets North Carolina's overall statewide buy rate for 2001 at 19.9 percent, which is slightly ahead of our renegotiated performance target of 22 percent. North Carolina has again demonstrated its commitment to reducing youth access by overcoming significant obstacles to sustain its statewide enforcement efforts during the past year, which has resulted in reaching the goal of 20% two years sooner than projected.

In addition, North Carolina is proud of its decision not to combine the enforcement of the youth access law and the annual Synar survey in any way. This decision affords our State the opportunity to conduct a truly random, unannounced, unbiased survey. Only the sampling statistician, Synar Coordinator and the 2 adult members of the survey team have access to the confidential list of outlets to be sampled and the only data released from the annual survey is the total number of outlets surveyed and the overall statewide buy rate.

Specific information related to the sample size and results are as follows:

- Original sample size of potential outlets: 961, (total of last year's completed inspections 802 and 159 from the 2001 supplemental list)
- Outcome: 44 out of business; 20 non-responses (closed at time of inspection - adjusted for in the analysis); 5 incorrect addresses; 4 unsafe (not in target population); 81 do not sell tobacco; and 807 completed inspections.
- Replacements were not used; the fielded sample allowed for loss due to non-response and ineligible businesses and provided coverage of new outlets (those names not on the 2000 list).
- Weights were adjusted at the stratum-level to account for non-response.
- Full documentation of the design and sample selection process, numbers, and equations were submitted in 1999. Likewise, several spreadsheets demonstrating the calculation and non-response adjustments of weights, the weighted estimates, and the sampling error calculations were submitted. This detail was deemed necessary for review of the methods because the multi-stage, unequal probability design is such that the completion of the Form G1 does not reproduce the rate and sampling error estimates. Considering the volume of material in such a submission and the fact that the same methods and spreadsheets were used again this year, these exhibits are not being resubmitted.

Summary Results for 2001 Compliance Survey								
Population Counts			Noncompliance Rates			Sampling Errors*		
OTC	VM	Total	OTC	VM	Total	OTC	VM	Total
8,937	151	9,088	0.199	0.221	0.199	0.022	0.139	0.022

\* All numbers are estimates based on survey data, except the sampling error for vending machines, which is calculated with an assumed design effect of 1.2 because of the small sample size (12). Note that the design effect for such small domain estimates approaches unity because the clustering effect is small. We note that the sampling error is slightly higher than the target needed for the 95 percent confidence, 1-tail precision specified in the Guidelines: that is, 0.22 compared to the target of 0.018. Last year, with the same design and sample size, the estimated sampling error at 0.017 was better than the target. Since the sampling error is itself an estimate (with variance), we recognize that it will vary from one year to the next. The sampling error can be explained as a result of survey timing. Two areas (ZIPS or aggregation of ZIPS) in the sample had higher noncompliance rates. In three other situations, pairs of PSUs within the same strata ranged from about 5 to 30 percent, which is a large variation within the three strata. We were able to determine that those PSUs with high noncompliance were surveyed prior to enforcement activities (conducted by the NC Division of Alcohol Law Enforcement) being implemented in those areas. Standard errors are presented in Table 1, below. They were calculated with the classical equations for stratified random sampling involving clustering and unequal selection probabilities. Within-stratum variances were based on PSU-level estimates.

**Table 1: Sample Sizes and Survey Precision**

Projected Performance Targets, annual	Estimated noncompliance rates, annual	Effective sample Size	Sampling error; target and actual	Error, one-tail 95 percent confidence level
1996: 0.50	0.500	629	0.025	
1997: 0.41	0.449	600 (622 actual)	0.026 (0.027 actual)	.04
1998: 0.34	0.259	800 (805 actual)	0.021 (0.022 actual)	.04
1999: 0.28	0.247	800 (803 actual)	0.021 (0.033 actual)	.05
2000: 0.24	0.201	800 (802 actual)	0.019 (0.017 actual)	.03
2001: 0.22	0.199	800 (807 actual)	0.018 (0.022 actual)	.04
2002: 0.20		800	0.018	.03

The standard errors for estimating the noncompliance rate must be multiplied by 1.64 to obtain the 95 percent, one-tail sampling error levels; that is, the 95 percent confidence statement for compliance in 2001 is that the true rate is less than 0.235 (0.199 + 0.036). The unbiased point estimate for the rate is below the target of 0.22.

**Sampling Weights:** Sampling and analysis weights were calculated for each outlet identified during fieldwork, whether or not they were inspected. The basic sampling weights were calculated as the reciprocal of the product of selection probabilities calculated at each stage of sampling. These weights were adjusted for non-response (establishment closed at time of visits) so that the analysis weights will produce valid estimates of totals (consistent with Dun and Bradstreet listings), including total number of vending machine locations and over-the-counter outlets in the State. Domain estimators are used to obtain separate estimates for vending machines and over-the-counter. Based on the field check on list coverage, the unadjusted survey estimate of number of outlets represents 81 percent of the target population.

**Variances:** Variances of the estimates are needed to place confidence intervals around the estimates and to test hypotheses. The variance estimates were calculated using the design features. That is, the unequal weighting, the clustering, and the stratification were accounted for.

**Analyses:** Statistical analyses produced State level estimates for over-the-counter and vending machine compliance, individually and combined, along with their sampling errors. Estimates of population totals were also developed. Very few of the sample outlets were not inspected so the non-response adjustments were expected to have minimal impact on the estimates. In fact, that is the case. Our adjusted weights were slightly less than 0.1995, with the unadjusted weights at 0.1998 – almost no difference.

The information in Form G1 is consistent (no discrepancies) with the reported compliance rates. Specifically the number of tobacco outlets reported in Column 2 are weighted estimates and the remaining data in Columns 3 and 4 are unweighted.

**Frame Coverage:** Approximately 80 geographic areas are visited during the inspection survey. These areas were stratified by 4 geographic areas and into urban/rural categories within each area. A random sample of 4 areas were selected using controlled selection (8 strata with a sample of 4 does not suit stratified random sampling) to conduct a structured field check on the list completeness. In mid-1999, a team of two traversed the entire ZIP area or group of ZIP areas containing the survey areas selected for the coverage study, recording (voice-activated recorder) name, address, and description of potential outlets. These potential outlets were then compared to the most current D&B list (the list used as the frame in NC). The coverage ranged from about 70 to 85 percent, with an estimated average of 81. Field testing will occur prior to beginning the 2002 survey to check the accuracy and completeness of the list.

**8. Describe the protocol for conducting random, unannounced inspections. Ensure the following specific items are addressed in your description.**

- § **Have any changes been made in the inspection protocol from the previous year?**
- § **Indicate the start and end dates of the Synar inspections conducted during the current reporting period and whether the dates are different from previous years.**
- § **Describe the methods used to recruit, select, and train youth inspectors and adult supervisors.**
- § **Describe the inspection methodology used. (e.g., consummated or unconsummated buys, instructions for carrying and showing identification, team composition and whether an adult monitor enters the outlet with the youth inspector, time of day inspections are conducted, compensation for the minors, data collection procedures, etc).**
- § **Besides what is specified in the State youth access tobacco law, explain whether the State has other legal or procedural requirements regarding how inspections are to be conducted (i.e., age of minor, time of inspections, training that must occur)?**
- § **Describe specific legal or procedural requirements the State has instituted to address the issue of minors' immunity when conducting inspections.**
- § **Describe specific legal or procedural requirements the State has instituted to address the issue of child safety.**

The following is a description of North Carolina's protocol for conducting the random, unannounced inspections. No changes were made in the State's inspection protocol. There are no other legal requirements other than those specified in our State Tobacco Law. There is one procedural requirement imposed because of the State's concern regarding the safety and well being of the youth conducting the

inspections. No testing was done of lounges or taverns even though they are not legally off limits to minors in the State. Liquor stores were not included due to the fact that they are all state operated and do not sale tobacco products.

The time frame for fieldwork extended from November 2000 through June 2001 on irregular dates so that the survey team was truly unanticipated. The survey team started two months earlier than last year's survey to allow more time for the youth teams to travel across the state, taking advantage of the Thanksgiving and Christmas breaks. A team balanced on age and gender similar to prior surveys was used throughout the period and throughout the State; a process similar to that used in the last survey to permit valid comparisons. To facilitate adjusting for any age-gender imbalances in the buy attempts, the interviewer code for each visit was recorded.

Two male and two female youth 15 years of age, who appeared to be approximately that age, took part in the annual inspections. The age of appearance was determined by having 15 adults guess the age of the youth and dividing the total by 15 to determine the average age of appearance. The purpose of the Age Estimation Test is to ensure that the youth appears to be under 18 years of age (according to the fifteen citizens who estimated their age on the day of the age test).

In order to assure inter-rater reliability, the youth were trained by the same instructor. The instructions included specific information on the role and responsibilities of the youth, followed by some role playing exercises covering various scenarios that prepared the youth for different types of questions or responses to expect from the merchants.

The youth were instructed to dress in the same manner in which they were dressed when they went through the age estimation procedure. They were also instructed not to misrepresent their age or to present any false identification when attempting to purchase tobacco products. When asked about their age the youth were instructed to state their correct age.

Written parental permission was obtained prior to participation for each minor being used in the study. Copies of the parental permission form, each youth's birth certificate, social security card, photo identification card and photo taken at the time of the age testing was placed on file with the State Substance Abuse Services Section. An 800 number was set up so parents could get in touch with their children at any time. Youth were supervised at all times by an adult. Since the project involved travel to various counties across the State, there was frequent overnight lodging. Whenever there was overnight lodging, youth teams were supervised by two adult supervisors, one male and one female, that served as chaperone s to same sex youth. Youth were paid for their participation in the Synar inspections. Meals and hotel expenses for the youth were also covered whenever over night lodging was required.

The youth were provided with the money needed to pay for the tobacco products. They entered the establishment alone and immediately attempted to purchase a tobacco product. The youth were instructed to first try to purchase from a vending machine or self-service display if that was available. If neither of these options were available, a single pack of cigarettes was requested. After the purchase attempt, the youth exited the establishment with or without the tobacco product. If a pack of cigarettes was purchased, an identification sticker was placed on the product and reported on the North Carolina Tobacco Retail Outlet Compliance Check Form. The data collection form was designed to include a variety of key data elements that provided valuable information in terms of assessing compliance with the Synar Amendment. The supervising adult(s) remained in the vehicle, or if they entered the establishment, they entered at a different time so that the merchant would not think they were together. The supervising adult was careful not to let the retailer see the two of them together so that the clerk would not think that the adult was a parent or part of a team conducting tobacco inspections.

Field results and completed data forms were entered daily and reviewed weekly to ensure that the fieldwork was proceeding as planned. Data collection forms were checked for consistency and completeness during this time so that problems could be reconciled early in the data collection period and so the data tapes were ready for analysis shortly after completion of the survey. Also, because of uncertainties in size measures used, eligibility rates were monitored so that adjustments could be made to the size of the fielded sample, as needed, before the end of the survey period.

The adult supervisor(s) were provided with a letter authorizing them to participate in these compliance checks as permitted under the current state statute. All tobacco products were destroyed at the end of the study.

## **SECTION II**

### **FFY 2002 (Intended Use):**

**In 2-5 pages, describe the State's plans to achieve the interim target rate for FFY 2002 (Part 96.130 (e) (4)). Ensure the following specific items are addressed in your description of activities and/or changes that are planned.**

- § Sampling methodology.**
- § Inspection protocol.**
- § Legislative actions and/or regulatory changes.**
- § Law enforcement.**
- § Activities that support law enforcement such as, merchant education, community education, media use, community mobilization.**

**Describe the State's strengths and challenges it faces in complying with the Synar requirements.**

**Describe any administrative or legal constraints on regulation and enforcement.**

**Describe the level of public support for inspections, enforcement, and public policy efforts**

Substance Abuse Services has made significant progress in reducing youth access to tobacco products during the past seven years. We will build upon our current efforts, strong relationships and identify new partners to work with us on this issue. No sampling methodology changes or inspection protocol changes are planned for FFY 2002. North Carolina will continue to use merchant education and enforcement strategies that have proven successful in the past. These activities will be implemented in partnership with Area Mental Health/Substance Abuse Programs, the NC Division of Alcohol Law Enforcement, the Tobacco Prevention and Control Branch, community-based organizations, youth groups and local coalitions such as Project ASSIST, Healthy Carolinians and Underage Drinking. Thus, no new law enforcement activities or merchant education activities are planned. The state will also continue to promote even more activities in community education, mobilization and strategic use of media among state level partners and especially the local Area Programs and their contract agencies.

The State's greatest strength in complying with Synar is the collaborative relationship that Substance Abuse Services has with the Area Mental Health/Substance Abuse Programs, the Division of Alcohol Law Enforcement (ALE) and the Tobacco Prevention and Control Branch. We are definitely a lot

stronger working together to reduce youth access to tobacco products than we would be working individually. With ALE being designated as the state's lead enforcement agency on this issue, we have been able to maintain on-going education and enforcement of the tobacco access law across the state. The Tobacco Prevention & Control Branch continues to work with us on merchant education efforts. They are funding the reprint of merchant education materials and new materials in Spanish that will be used by law enforcement, Area Mental Health/Substance Abuse Programs, as well as other state/local organizations implementing merchant and community education in their local communities.

Unfortunately, one of our greatest strengths can become our greatest challenge if the state is unable to secure long-term funding for enforcement. North Carolina has done very well with enforcement, being one of the first states to receive a federal Food and Drug Administration (FDA) contract in February 1998. With funding from the FDA, ALE conducted 500 compliance checks each month at retail outlets throughout the state. When the FDA funds were suspended in March 2000 as a result of the Supreme Court ruling, it seriously impacted North Carolina's enforcement efforts because the FDA contract had been the main vehicle for enforcement of the State Youth Access Law. In order to prevent a lapse in enforcement, Substance Abuse Services worked with the NC Department of Health and Human Services (DHHS) to identify lapsed salary dollars that were approved for use in continuing enforcement activities. Given the state's current budget deficit, securing funds to support and maintain enforcement activities, continue to be an even greater challenge for NC DHHS. Without enforcement, our noncompliance rate would increase significantly and jeopardize our Substance Abuse Prevention and Treatment Block Grant funding. Substance Abuse Services recognizes this as a serious issue that needs to be resolved to continue and expand education and enforcement operations.

Although North Carolina is a tobacco producing state, there is support at the state and local level for implementing strategies (including inspections, enforcement, public policy efforts and community initiatives) that reduce youth access to and use of tobacco products. This is mostly due to the steady increase over the last six years in youth tobacco use (38.3% high school students and 18.4% middle school students are current tobacco users— *1999 NC Youth Tobacco Survey*) in the state. Smoking rates among NC High School students rose 40.8% from 1991 to 1997 – *NC Youth Risk Behavior Survey*. This support comes locally from youth, parents, community groups as well as state/local leaders, public health officials, substance abuse prevention and addictions professionals, law enforcement and public/private organizations from across the state. Because of the state's increase in youth smoking rates, the NC 2010 Health Objectives has the goal of cutting youth tobacco use in half by 2010. Easy access and availability of tobacco products are identified as one of several environmental risk factors that need to be addressed.

Despite the challenges we face, North Carolina is continuing to work vigorously on reducing youth access tobacco products and recognizes that there is still much work to be done across the state to increase both merchant education and enforcement efforts. The results of the 2001 annual Synar Survey showed an increase in the rate of noncompliance from 11 to 22 percent for vending machines. There was also a small decrease from 20.2 to 19.9 percent for over-the-counter sales. This establishes North Carolina's overall statewide buy rate for 2001 at 19.9 percent, slightly ahead of the performance target of 22%.

North Carolina's renegotiated (February 2000) performance targets:

<u>Year</u>	<u>Application</u>	<u>PerformanceTarget</u>	<u>Actual Buy Rate</u>
1996	FFY 1997	50%	Baseline Established
1997	FFY 1998	41%	44.9
1998	FFY 1999	34%	25.9
1999	FFY 2000	28%	24.7
2000	FFY 2001	24%	20.1
2001	FFY 2002	22%	19.9
2002	FFY 2003	20%	

Substance Abuse Services is very pleased with the progress that has been made since 1995. We have developed and maintained strong working relationships with diverse agencies and organizations that share the common goal of reducing youth access to and use of tobacco products. North Carolina will continue to use merchant education and enforcement strategies that have proven successful and will actively work to develop new partnerships and strategies, as well as expand our reach to conduct youth access related activities in more communities across the state during FFY 2002.